

CLAIMS

1. (Original) Steel for the production of high-strength components with excellent low-temperature toughness, having the following composition (in % by weight):

C: 0.08 to 0.25 %,

Si: 0.10 to 0.30 %,

Mn: 0.80 to 1.60 %,

P: = 0.020 %,

S: = 0.015 %,

the sum of the P and S content being = 0.030 %,

Cr: 0.40 to 0.80 %,

Mo: 0.30 to 0.50 %,

Ni: 0.70 to 1.20 %,

Al: 0.020 to 0.060 %,

N: 0.007 to 0.018 %,

V: = 0.15 %,

Nb: = 0.07 %,

the sum of the V and Nb content being = 0.020 %, the remainder being iron and inevitable impurities.

2. (Currently Amended) Steel according to Claim 1, ~~characterised in that wherein~~ its C content is from 0.16 % by weight to 0.23 % by weight.

3. (Currently Amended) Steel according to Claim 1 ~~any one of the preceding claims, characterised in that wherein~~ its Mn content is from 1.00 % by weight to 1.35 % by weight.

4. (Currently Amended) Steel according to Claim 1 ~~any one of the preceding claims, characterised in that wherein~~ its Cr content is from 0.40 % by weight to 0.65 % by weight.

5. (Currently Amended) Steel according to Claim 1 any one of the preceding claims, ~~characterised in that wherein~~ its Mo content is from 0.35 % by weight to 0.50 % by weight.
6. (Currently Amended) Steel according to Claim 1 any one of the preceding claims, ~~characterised in that wherein~~ its Ni content is from 0.75 % by weight to 1.00 % by weight.
7. (Currently Amended) Steel according to Claim 1 any one of the preceding claims, ~~characterised in that wherein~~ its Al content is from 0.020 % by weight to 0.045 % by weight.
8. (Currently Amended) Steel according to Claim 1 any one of the preceding claims, ~~characterised in that wherein~~ its N content is from 0.007 % by weight to 0.015 % by weight.
9. (Currently Amended) Steel according to Claim 1 any one of the preceding claims, ~~characterised in that wherein~~ it has an austenite grain size that is finer than ASTM 10.
10. (Currently Amended) Use of a steel composed according to Claim 1 any one of the preceding claims for the production of high-strength components by cold forming with subsequent temper-hardening.
11. (Currently Amended) Use according to Claim 10, ~~characterised in that wherein~~ the components are means for the carrying, pulling, lifting, conveying or securing of loads.
12. (Currently Amended) Use according to Claim 10, ~~characterised in that wherein~~ the components are means for the connection of structural elements.
13. (Currently Amended) Use according to Claim any one of Claims 10 to 12, ~~characterised in that wherein~~ the components are chains.
14. (Currently Amended) Use according to Claim 13, ~~characterised in that~~ Wherein the chains are round steel chains.

15. (Currently Amended) Use according to either Claim 13 or Claim 14, characterised in that wherein the chains are welded.
16. (Currently Amended) Use according to Claim any one of Claims 10 to 15, characterised in that wherein the components have a strength of at least 1,200 MPa.
17. (Currently Amended) Use according to Claim 16, characterised in that wherein the strength is at least 1,550 MPa.
18. (Currently Amended) Use according to either Claim 16 or Claim 17, characterised in that wherein the strength is at least 1,600 MPa, in particular at least 1,650 MPa.
19. (Currently Amended) Use according to Claim any one of Claims 10 to 18, characterised in that wherein at a strength of at least 1,550 MPa, the fracture appearance transition temperature FATT of the components is at most -60 °C.
20. (Currently Amended) Use according to Claim any one of Claims 10 to 19, characterised in that wherein the notch impact working value is more than 45 J.
21. (Currently Amended) Use according to Claim any one of Claims 10 to 20, characterised in that wherein the material of the component has a technical crack initiation toughness J_{IC} of more than 170 N/mm².
22. (Currently Amended) Use according to Claim 21, characterised in that wherein the technical crack initiation toughness J_{IC} is more than 185 N/mm².
23. (Currently Amended) Use according to Claim any one of Claims 10 to 22, characterised in that wherein the components exhibit an elongation at break of more than 28%.